

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 11-019121

(43)Date of publication of application : 26.01.1999

(51)Int.Cl.

A61F 13/15

A61F 13/54

A41B 13/04

A61F 5/44

(21)Application number : 09-192028

(71)Applicant : OJI PAPER CO LTD

(22)Date of filing : 03.07.1997

(72)Inventor : TSUBATA MASARU

TAKESUE TOSHIMI

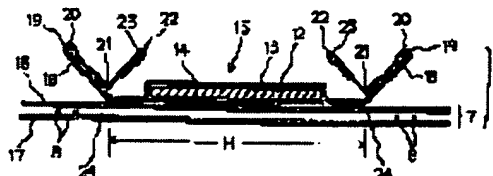
HIRAI YOSHIO

(54) PANTS-TYPE DISPOSABLE DIAPER

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a drastically excellent fitting feeling and a function for preventing the leakage of excrements by forming stereoscopic gather with the side edge part of a side flap as a free end by means of the contraction of an extending/contracting elastic member and arranging the extending/contracting elastic member along a diaper waist direction in the front body and then rear body of an exterior member.

SOLUTION: In this pants-type disposable diaper 1, a first leakage preventing flap (stereoscopic gather) adopting the first base point 21 of the side flap 18 as a fixing edge and the side edge part 22 as the free end and the second leakage preventing flap (stereoscopic gather) adopting the second base point 24 being an outer side edge in the adhesion width H of an absorbing mainbody 15 with the exterior member 7 as the fixing edge and the return line part 19 of the side flap 18 as the free end are arranged in double. Then, a first pocket structure is formed at the inside of the first leakage preventing flap and the second pocket structure is formed between the first and the second leakage preventing flaps. The extending/contracting member is arranged in the respective free ends in an extending state so that the structure where the free ends are adhered to skin during fitting it is formed.



LEGAL STATUS

[Date of request for examination] 30.01.2001

[Date of sending the examiner's decision of rejection] 06.03.2003

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office

BEST AVAILABLE COPY

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] The top sheet of liquid permeability, the backseat of liquid impermeability, and the absorber arranged among both [these] sheets, The absorptivity body which has the side flap which extends outside from the longitudinal direction edges on both sides of an absorber. Said absorptivity body is joined, surround the circumference of the waist from a wearer's antinode at the time of wear, and it consists of a sheathing member which hits an absorptivity body against a wearer and holds it. In the trousers mold usage **** diaper with which the edges-on-both-sides section at the time which faces was joined, circumference opening of the waist and circumference opening of a foot of a pair were formed, and the flexible elastic member has been arranged along with said each opening the past time of said sheathing member, and later self -- As for said absorptivity body, said side flap is turned up on a top sheet. By carrying out adhesion immobilization of the longitudinal direction both ends of the part which the flexible elastic member has been arranged in the state of expanding at the side edge section of a part by which the side flap was turned up, and was turned up on a top sheet The solid gathers which use the side edge section of a side flap as a free edge by contraction of said flexible elastic member are formed. Said sheathing member the later self at the past time -- the trousers mold usage **** diaper characterized by arranging two or more flexible elastic members along the direction of the circumference of the waist of a diaper at the time.

[Claim 2] As for said absorptivity body, said side flap is turned up on a top sheet. The 1st flexible elastic member and the 2nd flexible elastic member are arranged in the state of expanding at the side edge section and the clinch line part of a part by which the side flap was turned up, respectively. And while adhesion immobilization of the longitudinal direction both ends of the turned-up part is carried out on a top sheet Adhesion immobilization is carried out on a top sheet with the side edge section of the turned-up part, and the fixed wire prepared along with the longitudinal direction between line parts by return. Further said absorptivity body When adhesion immobilization is carried out by the adhesion field in alignment with the longitudinal direction prepared in width of face narrower than the breadth at said sheathing member The 1st solid gathers which uses the side edge section of said side flap as a free edge by contraction of said 1st flexible elastic member. The trousers mold usage **** diaper according to claim 1 characterized by forming the 2nd solid gathers which uses said clinch line part as a free edge by contraction of said 2nd flexible elastic member.

[Claim 3] said sheathing member is formed from the outer layer sheet which consists of a nonwoven fabric sheet, and the inner layer sheet which consists of a nonwoven fabric sheet by which the laminating was carried out to the outer layer sheet -- having -- the later self at the past time -- the trousers mold disposable diaper according to claim 1 or 2 characterized by arranging two or more flexible elastic members along the direction of the circumference of the waist of a diaper between said outer layer sheets and inner layer sheets at the time.

[Translation done.]

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the usage **** diaper currently beforehand formed in the trousers mold.

[0002]

[Description of the Prior Art] Conventionally, junction immobilization of the part which is equivalent to the regio lateralis on either side as a usage **** diaper in the side flap of the diaper of a flat type which is indicated by JP,57-77304,A at the time of wear, for example is carried out beforehand, and the so-called trousers mold diaper which prepared circumference opening of the waist and circumference opening of a foot is proposed. Moreover, in such a trousers mold usage **** diaper, opening of the circumference of a biped, circumference opening of the waist, and the thing to which flexible elasticity is given in order to raise the flattery nature and fit nature of a diaper to a wearing person to the circumference both-sides section of the waist further are indicated by JP,3-16920,U, JP,4-28363,A, JP,4-166150,A, JP,4-289201,A, etc. Attachment and detachment by the wearer are possible for such a trousers mold usage **** diaper, and need has been growing also as objects for an adult, such as a stage of a diaper detached building of a small child, or an incontinentia person.

[0003]

[Problem(s) to be Solved by the Invention] In the trousers mold usage **** diaper indicated by above-mentioned JP,3-16920,U and JP,4-28363,A Although the function which the flexible elastic member elastic to opening of the circumference of the waist and opening of the circumference of a biped is arranged, these flexible elastic members extract opening, and an absorber is made to fit a wearer, and prevents the leakage from opening is given to the diaper Since the circumference flank of the waist did not have flexible elasticity, when fit nature was imperfect, it absorbed urine etc. and the weight of a diaper increased during wearing, it had the problem that the shearing omission of a diaper arose.

[0004] Moreover, in the case of the trousers mold usage **** diaper indicated by JP,4-166150,A and JP,4-289201,A, arrange a flexible elastic member to the circumference perimeter of the waist, or the circumference flank of the waist, are raising fit nature, but Since the element of a routing counter [increase and] which constitutes a diaper by arranging a flexible elastic member to the circumference of the waist increases, while becoming trouble when attaining the purpose required for the goods of usage **** of mass-producing cheaply Thus, since it is the sense with which the arranged flexible elastic member essentially has the effectiveness which binds the circumference of a wearer's waist tight in a longitudinal direction and which this direction of bolting intersects at right angles to the direction where a diaper tends to slip down, There was a problem that the force of bolting must be enlarged for acquiring the effectiveness of stopping shearing omission, therefore the feeling of oppression beyond the need might be given to a wearer.

[0005] The leakage prevention function for the purpose of this invention to solve the above-mentioned technical problem, to form a trousers mold usage **** diaper by the absorptivity body and the sheathing member, to prepare a side flap in an absorptivity body, and to estrange up on the basis of an absorptivity body, Have the leakage prevention function to estrange up on the basis of a sheathing member, and the function to hold the excrement for which a usage **** diaper is asked originally in the inside and outside of an absorptivity body is given to an absorptivity body. By giving the function to make an absorptivity body a sheathing member at the time of **, and to stick an absorptivity body on a wearer's body, and to suppress a gap of an absorptivity body also to a motion of a wearer, and giving the function which became independent to the absorptivity body and the sheathing member It is in offering the trousers mold usage **** diaper which has the leakage prevention function of a very good feeling of wear, and excrement.

[0006]

[Means for Solving the Problem] The top sheet of liquid permeability [this invention], and the backseat of liquid impermeability, The absorptivity body which has the absorber arranged among both [these] sheets, and the side flap which extends outside from the longitudinal direction edges on both sides of an absorber, Said absorptivity body is joined, surround the circumference of the waist from a wearer's antinode at the time of wear, and it consists of a sheathing member which hits an absorptivity body against a wearer and holds it. In the trousers mold usage **** diaper with which the edges-on-both-sides section at the time which faces was joined, circumference opening of the waist and circumference opening of a foot of a pair were formed, and the flexible elastic member has been arranged along with said each opening the past time of said sheathing member, and later self -- As for said absorptivity body, said side flap is turned up on a top sheet. By carrying out adhesion immobilization of the longitudinal direction both ends of the part which the flexible elastic member has been arranged in the state of expanding at the side edge section of a part by which the side flap was turned up, and was turned up on a top sheet The solid gathers which use the side edge section of a side flap as a free edge by contraction of said flexible elastic member are formed. Said sheathing member the later self at the past time -- it is related with the trousers mold usage **** diaper characterized by arranging two or more flexible elastic members along the direction of the circumference of the waist of a diaper at the time.

[0007] Moreover, as for this invention, said side flap is turned up on a top sheet, as for said absorptivity body. The 1st flexible elastic member and the 2nd flexible elastic member are arranged in the state of expanding at the side edge section and the clinch line part of a part by which the side flap was turned up, respectively. And while adhesion immobilization of the longitudinal direction both ends of the turned-up part is carried out on a top sheet Adhesion immobilization is carried out on a top sheet with the side edge section of the turned-up part, and the fixed wire prepared along with the longitudinal direction between line parts by return. Further said absorptivity body When adhesion immobilization is carried out by the adhesion field in alignment with the longitudinal direction prepared in width of face narrower

than the breadth at said sheathing member The 1st solid gathers which uses the side edge section of said side flap as a free edge by contraction of said 1st flexible elastic member, It is related with the above-mentioned trousers mold usage **** diaper characterized by forming the 2nd solid gathers which uses said clinch line part as a free edge by contraction of said 2nd flexible elastic member.

[0008] moreover, said sheathing member forms this invention from the outer-layer sheet which consists of a nonwoven fabric sheet, and the inner layer sheet which consists of a nonwoven fabric sheet by which the laminating was carried out to the outer-layer sheet -- having -- the later self at the past time -- it is related with a trousers mold disposable diaper given in one of the above characterized by to arrange two or more flexible elastic members along the direction of the circumference of the waist of a diaper between said outer-layer sheets and inner layer sheets at the time.

[0009]

[Embodiment of the Invention] According to the trousers mold usage **** diaper of this invention, the side flap which extended outside from the longitudinal direction edges on both sides of an absorber on the absorptivity body, and was turned up on the top sheet is prepared. The 1st flexible elastic member is arranged in the state of expanding at the side edge section of the turned-up side flap. The longitudinal direction both ends of the turned-up side flap are fixed on a top sheet. Furthermore, along with the longitudinal direction of an absorptivity body, adhesion immobilization of the side flap is carried out on the top sheet with the side edge section and the fixed wire prepared between line parts by return. The side edge section estranges this fixed wire from an absorptivity body to the upper part as the 1st radix point, and the 1st solid gathers are formed. When it is made to wear as a trousers mold usage **** diaper made to unite with a sheathing member. The side edge section sticks inside a wearer's thigh, and the 1st pocket structure is formed in the both sides of an absorptivity body of said 1st solid gathers. Even if it is the case where a lot of urine is excreted at once, the case where urine is excreted by side *****, and the case where a loose passage or watery stool is excreted, excrement is a leakage broth with the pile thing out of the diaper according to pocket structure.

[0010] In this case, if the 1st pocket structure is formed by the 1st solid gathers as mentioned above, using the thing of the configuration of a sandglass mold as an absorber, it will set in the center section which meets crosswise [of an absorber]. Since the direction of spacing during both the radix points of the 1st solid gathers becomes large and serves as the form where an absorber is wrapped in in pocket structure from the breadth of an absorber, Even if it is in the condition to which urine was absorbed to some extent and the rate of absorption of an absorber fell when a lot of urine whose rate of absorption of an absorber is smaller than the rate of urination is excreted in the center section, i.e., the length-from-the-crotch-to-the-cuff section, which meets crosswise [of an absorber] Urine is temporarily confined into pocket structure and it becomes possible about urine leaking out of an absorptivity body to stop as much as possible.

[0011] The trousers mold usage **** diaper of this invention arranges the 2nd flexible elastic member in the state of expanding also to the clinch line part of the side flap of an absorptivity body further. Moreover, an absorptivity body By making it the configuration pasted up on the sheathing member by the adhesion field in alignment with the longitudinal direction prepared in width of face narrower than the breadth When it is made to wear as a trousers mold usage **** diaper made to unite with a sheathing member, a clinch line part Because estrange both the radial border of the adhesion field of an absorptivity body and a sheathing member from a sheathing member to the upper part as the 2nd radix point, the 2nd solid gathers are formed and a clinch line part sticks inside a wearer's thigh It becomes possible to make the 2nd pocket structure form between the 1st solid gathers and the 2nd solid gathers. Since it becomes possible about being able to confine into the 2nd pocket and excrement leaking out of an absorptivity body to stop more certainly even when excrement overcomes the 1st pocket, it is desirable.

[0012] At this time, the backseat of liquid impermeability which forms an absorptivity body is made equal to the breadth of the longitudinal direction both ends of an absorber in the trousers mold usage **** diaper of this invention, and if a side flap is formed with the nonwoven fabric sheet which extends from the longitudinal direction edges on both sides of a backseat, since the field of the outside to the absorptivity body of the 2nd pocket has liquid impermeability, it will become possible [stopping further] about excrement leaking out of an absorptivity body.

[0013] Moreover, the 1st radix point of the 1st solid gathers which is the point which carried out adhesion immobilization of the field between the clinch line part of the turned-up side flap, and the side edge section in the trousers mold usage **** diaper of this invention at the top sheet. About a location with the 2nd radix point of the 2nd solid gathers which is the point which carried out adhesion immobilization, an absorptivity body to a sheathing member It is possible for the cross-section configuration of a U character mold to make it form by the 1st solid gathers and the 2nd solid gathers, when the 1st radix point is carried out inside the 2nd radix point. It is possible for the cross-section configuration of a V character mold to make it form by the 1st solid gathers and the 2nd solid gathers, when the 1st radix point and 2nd radix point are in the same location. Moreover, it becomes possible [when the 1st radix point is carried out outside the 2nd radix point, it is possible to make the cross-section configuration of a Y character mold where the 1st solid gathers branched from the 2nd solid gathers form, and] to suppress to the minimum that excrement leaks out of an absorptivity body also when it is any.

[0014] Moreover, the trousers mold usage **** diaper of this invention gives the function to hold the excrement for which a usage **** diaper is asked originally in the inside and outside of an absorber to an absorptivity body. In order to give the function to make an absorptivity body a sheathing member at the time of **, and to stick an absorptivity body on a wearer's body, and to suppress a gap of an absorptivity body also to a motion of a wearer, the flexible elastic member is arranged at opening of the circumference of the foot of the pair of a sheathing member, and opening of the circumference of the waist.

[0015] Moreover, a sheathing member is formed from the inner layer sheet which consists of a nonwoven fabric sheet by which the laminating was carried out on the outer layer sheet which consists of a nonwoven fabric sheet, and an outer layer sheet. between the edges-on-both-sides sections at the past time of a sheathing member, and/or later self -- by arranging two or more flexible elastic members in the state of expanding as a means to give flexible elasticity in the direction of the circumference of the waist of a diaper between the outer layer sheet between the edges-on-both-sides sections at the time, and a inner layer sheet it has the work to which a wearer is made to stick an absorptivity body continuously, and at this time, even if arrangement of a flexible spring material is only a side at the past time. that effectiveness is fully demonstrated -- having -- later self -- time -- a side -- the thing of a hip which sticks an absorber automatically according to a form -- it is -- although -- later self -- time -- a side -- arranging -- if -- more -- a wearer -- the effectiveness which prevents a gap of the absorptivity body under wear also to a motion is acquired. In this case, a flexible elastic member may be in the condition of the discontinuity which may arrange along with the circumference of the waist succeeding the perimeter, and has been arranged only to the central field at the order body time, or the circumference flank of the waist. Moreover, it is also possible to also arrange the flexible elastic member of circumference opening of the waist and circumference opening of a foot of a pair in the state of expanding between the inner layer sheets by which the laminating was carried out on the outer layer sheet, and for it to be possible, and for the flexible elastic member

of circumference opening of the waist to make the longitudinal direction of a diaper extend further, to turn up either an outer layer sheet or an inner layer sheet, and to arrange it in the meantime.

[0016] The very good feeling of wear similar to the feeling which wore underwear is obtained without having good permeability and piling up inside a **** diaper using sweat during wear, since the outer layer sheet and inner layer sheet which furthermore form a sheathing member are formed with the nonwoven fabric sheet.

[0017]

[Example] The drawing which shows the example of this invention below is made reference, and this invention is explained in detail. Drawing 1 is the perspective view of the trousers mold usage **** diaper in the example of this invention. the past time which the trousers mold usage **** diaper 1 of this invention shown in drawing 1 has the circumference opening 2 of a foot, and the circumference opening 3 of the waist, and was formed by extending between circumference openings of said foot on either side -- 4 and later self -- time -- 5 -- a side seam 6 -- adhesion closing -- it is carried out. adhesion closing of a side seam 6 -- past time -- 4 and later self -- time -- 5 -- superposition and edges on both sides -- an outside -- having projected -- a condition -- or -- edges on both sides -- the inside -- having projected -- a condition -- edges on both sides -- hot melt adhesive, pressurization melting, ultrasonic melting, etc. are joined independent or by combining them along the outermost part.

[0018] Drawing 2 is the perspective view showing the expanding condition which carried out open expansion of the side seam 6 of the trousers mold usage **** diaper 1 of this invention shown by drawing 1. While the circumference opening of foot flexible elastic member 8 is formed near the circumference opening 2 of a foot of right and left of the sheathing member 7 and flexible elasticity is given near the circumference opening 3 of the waist, flexible elasticity gives by the circumference opening of the waist flexible elastic member 10 -- having -- **** -- past time -- the circumference of the waist of 4, and later self -- time -- 5 -- flexible elasticity is given to the circumference of the waist by the circumference of the waist flexible elastic member 11.

[0019] Drawing 3 is drawing of longitudinal section showing the condition of having cut the trousers mold usage **** diaper 1 of this invention in the direction of X-X' in alignment with the longitudinal direction of the diaper in drawing 2, and an absorber 12 is arranged between the top sheet 13 of liquid permeability, and the backseat 14 of liquid impermeability, and it forms the absorptivity body 15.

[0020] The both ends of the outer layer sheet 17 which adhesion immobilization at least of the part is carried out, and is located under the inner layer sheet 16 by predetermined width of face along with a longitudinal direction on the inner layer sheet 16 with which the absorptivity body 15 constitutes the sheathing member 7 are turned up on the absorptivity body 15 in the condition of having inserted so that the circumference opening of the waist flexible elastic member 10 might be wrapped in, and the circumference of the waist flexible elastic member 11 is arranged between the inner layer sheet 16 and the outer layer sheet 17. When only the both ends and center section where the absorptivity body 15 and the sheathing member 7 meet the longitudinal direction of an absorptivity body at this time are pasted up and a part for non-jointing is prepared, it is more desirable in order that the rigidity of the absorptivity body 15 may not check telescopic motion of the circumference of the waist flexible elastic member 11 arranged at the circumference of the waist at the time of wear.

[0021] With the cross-sectional view showing the condition of having cut drawing 4 and the trousers mold usage **** diaper 1 of ***** in the direction perpendicular to the longitudinal direction of the diaper in drawing 2 of Y-Y' The absorptivity body 15 meets by predetermined width of face (H) on the inner layer sheet 16 which constitutes the sheathing member 7 at the longitudinal direction of the absorptivity body 15. At least in part Adhesion immobilization is preferably carried out in the longitudinal direction both ends and center section of this predetermined width of face (H), and the circumference of foot flexible elastic member 8 is arranged between the inner layer sheet 16 and the outer layer sheet 17.

[0022] In drawing 4, the absorptivity body 15 has the top sheet 13 of liquid permeability, the backseat 14 of liquid impermeability, the absorber 12 arranged among these, and the side flap 18 which extends outside from the edges on both sides of a backseat 14, the side flap 18 is turned up by the clinch line part 19 on the top sheet 13, and the 2nd flexible elastic member 20 is arranged at the clinch line part 19.

[0023] Moreover, in the 1st radix point 21, adhesion immobilization is carried out at the top sheet 13, and further, the turned-up side flap 18 is arranged at the side edge section 22 of the side flap 18 so that the 1st flexible elastic member 23 may be wrapped in by the side flap 18. Furthermore, adhesion immobilization of the longitudinal direction both ends 9 of the side flap 18 turned up on the top sheet 13 is carried out on the top sheet (refer to drawing 2).

[0024] For this reason, the 1st leakproof flap which uses the 1st radix point 21 of the side flap 18 as a fixed edge at the trousers mold usage **** diaper 1. and uses the side edge section 22 of the side flap 18 as a free edge (solid gathers), The 2nd radix point 24 which is the radial border of the adhesion width of face H of the absorptivity body 15 and the sheathing member 7 is used as a fixed edge. The 2nd leakproof flap (solid gathers) which uses the clinch line part 19 of the side flap 18 as a free edge is arranged at a duplex. The 1st pocket structure is formed inside the 1st leakproof flap (solid gathers) (core side of an absorptivity body), and the 2nd pocket structure is formed between the 1st leakproof flap (solid gathers) and the 2nd leakproof flap (solid gathers). Moreover, since the flexible elastic member is arranged in the state of expanding in each free edge, the structure which a free edge sticks to the skin is formed during wear.

[0025] It is the cross-sectional view showing the condition of having cut in the direction, and like what was shown by drawing 4, adhesion immobilization of the absorptivity body 15 is carried out at least by the part on the Z-Z' inner layer sheet 16 with drawing 5 perpendicular to the longitudinal direction of a diaper [in / for the trousers mold usage **** diaper 1 of this invention / drawing 2] which constitutes the sheathing member 7, and the circumference of foot flexible elastic member 8 is arranged between the inner layer sheet 16 and the outer layer sheet 17.

[0026] In drawing 5, the absorptivity body 15 like what was shown by drawing 4 The top sheet 13 of liquid permeability, The backseat 14 of liquid impermeability, and the absorber 12 arranged among these, It has the side flap 18 which extends outside from the edges on both sides of a backseat 14. The side flap 18 is turned up on the top sheet 13 by using the edges-on-both-sides section of an absorber 12 as a line part 19 by return, and adhesion immobilization of the turned-up side flap 18 is carried out at the top sheet 13.

[0027] Drawing 6 is the top view showing the condition of having arranged the circumference opening of foot flexible elastic member 8, and the circumference of circumference opening of the waist flexible elastic member 10 bent back flexible elastic member 11 to the sheathing member 7 which forms the trousers mold usage **** diaper of this invention, and each elastic member consists of a flexible two or more yarn-like spring material, and has the work to which a wearer is made to stick an absorber continuously with such flexible elasticity.

[0028] As a top sheet of liquid permeability used for the trousers mold usage **** diaper of this invention The liquid permeability nonwoven fabric which consists of polyethylene, polypropylene, polyester, and a synthetic fiber that used other thermoplastics as the raw material is used. As a backseat of liquid impermeability The polyethylene sheet of liquid impermeability, the polyethylene sheet which

prepared the fine hole preferably, A liquid impermeable sheet with the moisture permeability which added and extended the filler to thermoplastics or the sheet of these liquid impermeability, and a nonwoven fabric may be stuck, a fear of being steamed if moisture permeability is given disappears, and it is more comfortable.

[0029] Moreover, the 1st flexible elastic member, the 2nd flexible elastic member, a circumference opening of foot flexible elastic member, and a circumference of circumference opening of the waist flexible elastic member bent back flexible elastic member The flexible elastic body used for the usual usage **** diapers, such as urethane yarn and yarn rubber, can be used as it is. these flexible elastic members -- respectively -- an expanding condition -- the later self at the side flap, circumference opening of foot, circumference opening of the waist, and past time -- time -- the circumference of the waist -- arranging -- having -- hot melt adhesive -- predetermined -- adhesion immobilization is carried out to the field.

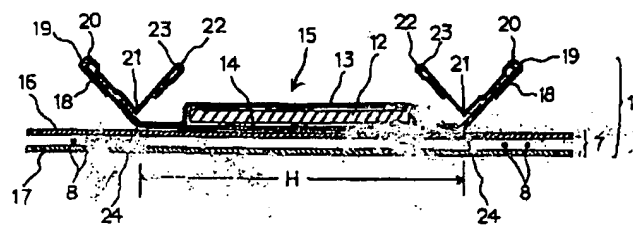
[0030] In fluff pulp, what used the superabsorbency polymer together to the principal member is desirable. in addition, as for an absorber, mixture and laminated material, such as absorbent-paper independence or heat welding fiber, are used. Moreover, although it may be desirable to consider as the laminated structure which wrapped the whole in tissue and a sandglass mold or a ** type is sufficient as the configuration of an absorber, fit nature with the better sandglass mold is obtained.

[0031] As for a side flap, an outer layer sheet, and an inner layer sheet, what can use the nonwoven fabric which consists of polyethylene, polypropylene, polyester, and a synthetic fiber that used other thermoplastics as the raw material, and has water repellence is more desirable.

[0032]

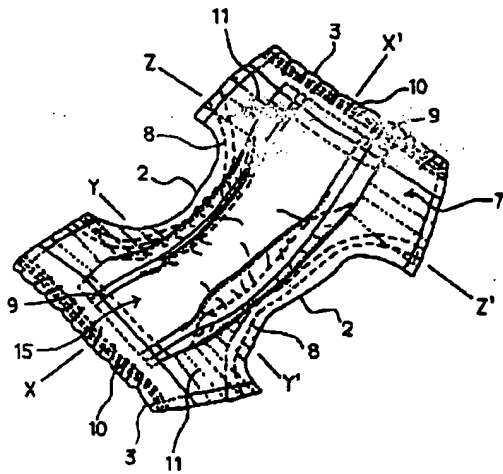
[Effect of the Invention] The trousers mold usage **** diaper of this invention joins an absorptivity body to an absorptivity body, and consists of sheathing members which address this to a wearer and hold it. An absorptivity body Even if it is the case where pocket structure is formed and a lot of urine is excreted thereby at once by forming solid gathers in the longitudinal direction edges-on-both-sides section, the case where urine is excreted by side *****, and the case where a loose passage or watery stool is excreted It can prevent that excrement is shut up into pocket structure and begins to leak out of a diaper. Moreover, the outer layer sheet and inner layer sheet with which a sheathing member constitutes this are formed with a nonwoven fabric sheet. Between the outer layer sheet at the time, and the inner layer sheet, two or more flexible elastic members are arranged along the direction of the circumference of the waist. past time and later self -- Since urine etc. leakage-comes to be hard since this stops being able to produce a clearance between an absorptivity body and a wearer easily, and it has still better permeability, between good wear similar to the feeling which sweat did not pile up inside the diaper during wear, and wore underwear is obtained.

[Translation done.]



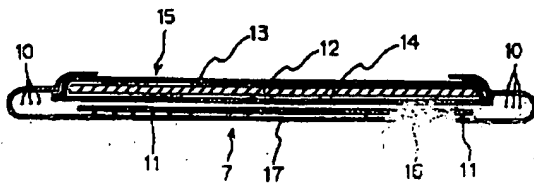
[Translation done.]

Drawing selection drawing 2



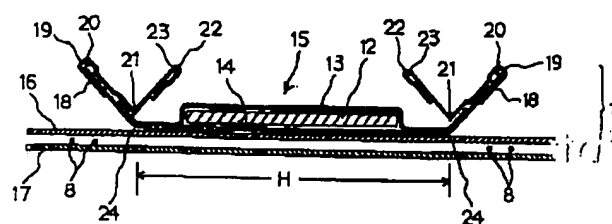
[Translation done.]

Drawing selection drawing 3



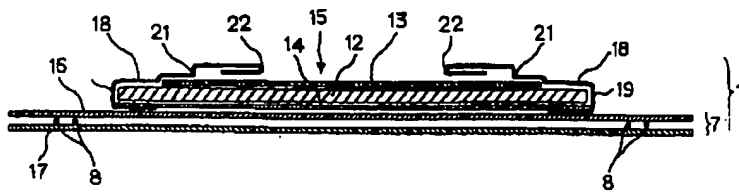
[Translation done.]

Drawing selection drawing 4



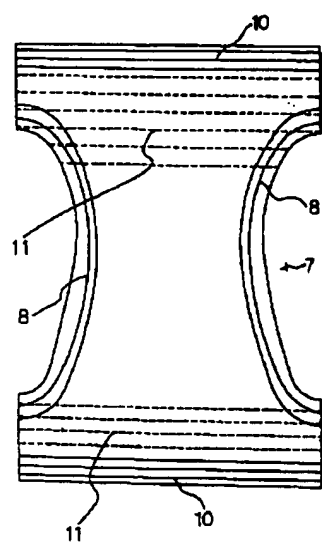
[Translation done.]

Drawing selection drawing 5



[Translation done.]

Drawing selection drawing 6



[Translation done.]

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☒ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.